

REMARKS

Claims 1-23 are pending in the application with Claims 1, 11 and 21-23 being the independent claims. With the foregoing amendments, Claims 6-8 and 16-18 are cancelled in favor of respective base Claims 1 and 11 now reciting the terms of these dependent claims. The other claim amendments are further made clear below.

Claims 11-22 have been rejected under 35 U.S.C. § 112 first paragraph as being based on a disclosure which is not enabling. In support of this rejection, the Office Action refers to the Claim 11 claim term "a digital processor" and Applicant's reference to parent Application No. 09/127,191, now U.S. Patent No. 6,311,144 for support.

M.P.E.P. § 2164 states that "the enablement requirement refers to the requirement of 35 U.S.C. § 112 first paragraph that the specification describe how to make and how to use the invention...The purpose of the requirement that the specification describe the invention in such terms that one skilled in the art can make and use the claimed invention is to ensure that the invention is communicated to the interested public in a meaningful way. The information contained in the disclosure of an application must be sufficient to inform those skilled in the relevant art how to both make and use the claimed invention...The enablement requirement of 35 U.S.C. § 112 first paragraph is separate and distinct from the description requirement...therefore the fact that an additional limitation to a claim may lack descriptive support in the disclosure as originally filed does not necessarily mean that the limitation is also not enabled. In other words, the statement of a new limitation in and of itself may enable one skilled in the art to make and use the claim containing that limitation even though that limitation may not be described in the original disclosure. Consequently such limitations must be analyzed for both enablement and description using their separate and distinct criteria..."

M.P.E.P. § 2164.01 goes on to say "...any analysis of whether a particular claim is supported by the disclosure in an application requires a determination of whether that disclosure, when filed, contains sufficient information regarding the subject matter of the claims as to enable one skilled in the pertinent art to make and use the claimed invention. The standard for determining whether the specification meets the enablement requirement was cast in the Supreme Court decision of *Mineral Separation v. Hyde*, 242 US 261, 270 (1916) which postured the question: is the experimentation needed to practice the invention undue or unreasonable? That standard is still the one to be applied. In *re Wands*, 858 F.2d 731-737, 8 U.S.P.Q.2d 1400, 1404 (Fed. Ct. 1988)..." And quoting from case law, M.P.E.P. § 2164.01 states that "the test of

enablement is whether one reasonably skilled in the art could make or use the invention from the disclosures in the patent coupled with information known in the art without undue experimentation..." Further, according to M.P.E.P. § 2164.01 "A patent need not teach, and preferably omits, what is well known in the art..."

Applicant contends that the subject claim term "digital processor" is well known in the art. Applicant also does not agree with the statement on page 7 of the Office Action that admission was made that the present disclosure lacks support for a system. For instance, original filed Specification page 4, lines 1-5, page 13, lines 14-23, original Claim 23 and use of the term "automated system" throughout the Specification are supportive of a system claim. Further, these noted passages coupled with information known in the art at the time of filing (August 28, 2001) would enable one reasonably skilled in the art to make or use the invention without undue experimentation in satisfaction of M.P.E.P. § 2064 - 2064.01.

Further, the Office Action cites 37 C.F.R. 1.57(c) regarding proper incorporation by reference of "essential material". This part of Rule 57 became effective October 21, 2004 which is after the filing date of the present application and thus does not apply in the manner stated by the Office Action. See the Federal Register, Vol. 69, No. 182, Tuesday, September 21, 2004, pages 56482 - 56539. Page 56501 sets forth that Rule 57(c) codifies the practice in then M.P.E.P. § 608.01(p). That section of the M.P.E.P. states "...a portion of a prior application...for which benefit is claimed under 35 U.S.C. 119(e) or 120, applicant may include a statement at the time of filing of the later application incorporating by reference the prior application...The inclusion of such an incorporation by reference statement in the later-filed application will permit applicant to include subject matter from the prior application into the later filed application without the subject matter being considered as new matter. For the incorporation by reference to be effective as a proper safeguard, the incorporation by reference statement must be filed at the time of filing of the later-filed application..." Applicant's original page 1 of the Specification on the day of filing the application incorporated by reference several pending U.S. patent applications, one of which was U.S. Patent Application No. 09/127,191, filed on July 31, 1998, which issued as U.S. Patent No. 6,311,144 on October 30, 2001. In that patent there is literal disclosure and description of a "digital processor" (see Fig. 1 "processor 14" and corresponding description in Col. 3, line 45 - Col. 4, line 1 of parent U.S. Patent No. 6,311,144). Use and reference to such digital processor in the subject application at hand is permissible and is not new matter according to M.P.E.P. § 608.01(p).

For the above reasons, the claim term "digital processor" is believed to have proper disclosures, and enablement under § 112 first paragraph is satisfied. Thus the rejection of Claims 11 - 22 under 35 U.S.C. § 112 first paragraph should be withdrawn.

Claims 2-10 have been rejected under 35 U.S.C. § 112 second paragraph where these dependent claims recite a "process" and their base Claim 1 as last amended recites a "method". The foregoing amendments to Claims 2-5 and 9-10 cure the alleged antecedent basis issue. Claims 2-5 and 9-10 now recite the limitation "the method". Claims 6-8 are now cancelled. Acceptance is respectfully requested.

Claims 11-20 have been rejected under 35 U.S.C. § 112 second paragraph. In support of this rejection, the Office Action states that "it is unclear in Claim 11 if the system comprises 'a digital processor' or the system is in 'a digital processor'..." The foregoing amendment to Claim 11 now makes clear that the claimed computer system comprises a digital processor and that the digital processor executes various modules recited in the claim. Dependent Claims 12-15 and 19-20 follow respective base Claim 11. Claims 16-18 are now cancelled. As such the requisites of 35 U.S.C. § 112 second paragraph are believed to be met and the § 112 second paragraph rejection of Claims 11-20 should be withdrawn.

Claims 1-5 and 21-23 have been rejected under 35 U.S.C. § 103 as being unpatentable over "EUROEXPERT - Best Practices: French Social Security" UNEDIC dated 1992 in view of the IEEE article -- "An Introduction to Six Sigma With Design Example" by Robert White dated 1992. Further Claims 6-20 have been rejected under 35 U.S.C. § 103 as being unpatentable over the EUROEXPERT article in view of the Six Sigma article by White (1992) further in view of U.S. Patent No. 6,532,465 to Hartley et al.

The present invention as now claimed designs and constructs an information system architecture based on a working model of the proposed information system architecture. The working model is a mathematical model having a business layer, an application layer and a technology layer. Performance metrics of each layer of the model are modeled and compared with business requirements defined for business processes of interest. The proposed information system architecture is constructed and includes application components, a technology bus and an application bus. During this construction, each business process is mapped to an application component. The application component is modeled by a corresponding application component model in the application layer of the working mathematical model. The technology bus of the constructed proposed information system architecture serves as an abstract interface for data

access or technology services between the components modeled in the application and technology layers of the working mathematical model. The application bus of the constructed proposed information system architecture provides a communication, distribution and management interface between application component models in the application layer of the mathematical model.

The working mathematical model not only predicts (models) performance of the constructed proposed information system architecture but also predicts application component behavior (component level performance) in the constructed proposed information system architecture. This modeling of performance metrics occurs during the design and construction phase of the proposed information system architecture. That is, the mathematical model governs the constructing of the application components, technology bus and application bus in the proposed information system architecture.

None of the cited art provides a constructed proposed information system architecture that includes two buses (a technology bus and an application bus) that provide abstract interfacing and separate management interfacing, respectively, as now claimed by the present invention. Further, none of the cited art provides a working multi-layer mathematical model that governs the design and construction of such an information system architecture as now claimed in base Claims 1, 11 and 21-23 and supported by original disclosure Specification pages 4, lines 3-16; page 7, lines 18-28; page 10, lines 4-26, Figs. 1 and 2A, 2B.

The patentably distinguishing claim language supporting the foregoing reads (in pertinent part)

"...using a multi-layer mathematical model of a proposed information system architecture supporting the business process design, constructing the proposed information system architecture, the multi-layer mathematical model being implemented on a computer and the layers of the multi-layer model comprising a business layer, an application layer, and a technology layer, the business layer, application layer and technology layer having different data than each other, said constructing comprising mapping each business process to an application component which is modeled by a corresponding application component model in the application layer, each application component model linked to one or more component models in the application and technology layers, which support the corresponding application component,

wherein the constructed proposed information system architecture comprises a technology bus, the technology bus serving as an abstract interface for data access or technology services between the components modeled in the application and technology layers and wherein the constructed proposed information system architecture further comprises an application bus, the application bus providing a communication, distribution, and management interface between application component models in the application layer;..." and

"...during the constructing, modeling performance metrics for each layer of the multi-layer model...determining modifications to the proposed information system architecture as being constructed, resulting in an information system architecture design, a description of the resulting information system architecture design being output."

See base Claims 1, 11 and 21-23. The respective dependent claims inherit these claim limitations.

On page 11 of the Office Action at hand the EUROEXPERT reference is stated as failing to teach "...specifically modeling the performance [metrics] for each layer, simulating, comparing them to the requirements, acceptability, proposing & modifying the [metrics] at appropriate layers." The Six Sigma article by White is set forth as disclosing "...how Six-Sigma methodology can be used to perfect any process, system or component..."

However, neither EUROEXPERT nor White discloses the two bus constructed proposed information system architecture, i.e., a technology bus and an application bus that provide abstract interfacing and separate management interfacing, respectively, as now claimed in base Claims 1, 11 and 21-23. No such structure is disclosed in EUROEXPERT or in White. The White reference merely discloses a process and no tool or structure. Claims 2-5 depend from Claim 1 and include the foregoing patentably distinguishing claim limitations of this base claim.

For the foregoing reasons the § 103 rejection of Claims 1-5 and 21-23 is believed to be overcome and that rejection should be withdrawn.

With regard to the § 103 rejection of Claims 6-20, the arguments over EUROEXPERT and the Six Sigma article by White from above also apply here.

Hartley discloses a multi-tier structure that provides the functionality to perform more application specific processes at tiers closest to the users while increasingly abstract functions are performed at a central location near the base. Located at the base may be a central server which

includes a database. The base server may be connected to at least one application server located at an intermediate tier. The application server may perform functions relevant to the location it is serving while the central server may provide services for all parts of the system. The uppermost tier may include client nodes which act as the interface between the system and the users. See col. 4, lines 55-67. In addition, Hartley discloses an object oriented system which employs various objects that process data at different levels of abstraction between the client node and the base tier. Presentation objects in the uppermost tier may correspond to one or more business objects that are highly specific to a client's implementation. These objects may be focused toward supporting user interfaces, report writers, etc. Mapping between the presentation objects and the business objects located on an intermediate tier may be provided. The business objects may contain key abstracted business logic supported by the particular implementation of the system. Contained within these objects may be the metadata and rules necessary to drive the processing engines. See col. 5, lines 12-25.

Thus the Office Action on the bottom of page 16 to the top of page 17 alleges "...it would have been obvious to one (e.g. a designer) of ordinary skill in the art...to use the layering approach, communication strategy and real-time/batch processing taught by Hartley and apply them to White/EUROEXPERT references. The motivation would be a design, which is abstract enough [that] can handle new business requirements without significantly changing the underlying architecture, and specific enough that the business layer can provide rule based processing by passing in metadata..."

What the combination of these references misses is the use of the modeled performance metrics during the construction of the proposed information system architecture, so that modifications to the proposed information system architecture as being constructed are determined as in the claimed invention. The patentably distinguishing claim language reads in pertinent part "...during the constructing, modeling performance metrics for each layer of the multi-layer model including continuous service of the proposed information system architecture...; and determining modifications to the proposed information system architecture as being constructed, resulting in an information system architecture design..." See base Claims 1, 11 and 21-23 as now amended. Dependent Claims 6-8 and 16-18 are now cancelled. Dependent Claims 9-10 inherit the patentable distinction of base Claim 1. Likewise, dependent Claims 12-15 and 19-20 inherit the foregoing distinction from base Claim 11. It is this use of modeling of performance metrics during the design and construction phase of a proposed information system

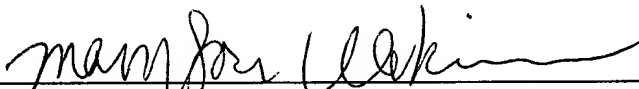
architecture which is missing from EUROEXPERT, the Six Sigma article by White and the Hartley patent, individually or in any combination. Thus the § 103 rejection of Claims 6-20 is believed to be overcome and this rejection should be withdrawn.

CONCLUSION

In view of the above amendments and remarks, it is believed that all claims (Claims 1-5, 9-15 and 19-23) are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned.

Respectfully submitted,

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